

## **INTEGRATED AIR INLET SYSTEM FOR MULTI-PROPULSION AIRCRAFT ENGINES**

### **ABSTRACT OF THE DISCLOSURE**

An air inlet duct for an air-breathing combined-cycle aircraft engines is internally divided into separate channels for low-speed and high-speed components of the engine, and contains one or more movable panels that are fully contained within the duct and pivotal between an open position in which incoming air is directed to both channels and a closed position in which all incoming air is directed to the channel leading to the high-speed engine. This integrated duct utilizes all incoming air at all stages of flight with no change in either the geometry of the air capture portion of the engine or the engine itself, and no exposure of movable leading edges. The result is a minimum of shock waves and a high degree of efficiency in operation of the engine.

60143702 v1